

Abstract of the Invention

System and method for detecting an unauthorized movement of a communications or meter device, such as a meter that monitors and communicates a measure of use of energy or some other metered quantity (electrical, gas, water, etc.), to prevent meter tampering or removal. A bolt, screw, nail or other attachment mechanism, used to attach the device to a selected stationary or movable object, is provided with a permanent magnet having a selected magnetic field direction that can be transverse to, a selected attachment mechanism direction (e.g., transverse to a bolt shaft direction). A field-activated magnetic switch, such as a reed switch or a Hall effect switch, having a selected switch direction is located near the permanent magnet. If a user attempts to remove, or tamper with the position of, the communications device, by rotating or translating the attachment mechanism, the direction and/or magnitude of the magnetic field changes sufficiently to switch the switch from a first state (normal) to a second state (alarm), and an alarm signal is generated. In a second embodiment, a plunger connected to a micro switch is moved by a contact portion of an attachment mechanism as the attachment mechanism rotates or translates. In a third embodiment, the attachment mechanism is provided with an electrically conducting part and a non-conducting part, and a current-sensing or voltage-sensing circuit is movably connected to the mechanism at two spaced apart locations.